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April 21, 1993

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RE: April 13, 1993, Revision to Closure Plan for Surface Impoundment, Quemetco, Inc., City of Industry, California, EPA I.D. # CAD 066 233 966

Ladies and Gentlemen:

In follow up to the March 10, 1993, meeting regarding the above referenced closure plan, enclosed please find the following:

- Key to Enclosed Replacement Pages detailing the plan revision (Note page 75 of the January 1993 plan should also be removed).
- Response to Meeting Comments which supplements the meeting discussions and identifies the modification made to the plan.
- Closure Plan Replacement Pages for insertion and replacement as identified in the key.

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I trust that this material will be found beneficial in addressing the meeting discussions. However, should you have any questions or comments, do not hesitate to contact me at (214) 631-6070.

Respectfully submitted,

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GL/mc

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QUEMETCO, INC.
CITY OF INDUSTRY, CALIFORNIA
RESPONSE TO DTSC MEETING ON MARCH 10, 1993 COMMENTS

The following discusses each of the comments in the Department of Toxic Substances Control (DTSC) Recommendations on the January 1993 Revised Closure Plan for Surface Impoundment at Quemetco, provided to Environmental Strategies Corporation (ESC) during the March 10, 1993, meeting with representatives from DTSC, RSR, EPA, and ESC. Reference to subsequent modifications to the January 15, 1993, revised Closure Plan are provided.

DTSC Comment 1

Typographical errors: The correct readings shall be:

- Page 3, line 5,...land users "is" provided in Appendix A.
- Page 8, 3rd Para., Line 4, ...shallow wells "except" MW-1 have gone dry.
- Page 12, 1st para., 1st line and 3rd para., 2nd line, _____ The reference to Figure 2 shall be Figure 3.

Discussion

Quemetco has modified the typographical errors accordingly.

Plan Modification

- Section 2.1 line 5, has been modified by omitting "in" and including "is".
- Section 2.5, sub heading Hydrogeology, 3rd paragraph, line 4 has been modified by omitting "expect" and including "except".
- Section 3.1 3rd paragraph, line 1, and 5th paragraph line 2, has been modified by omitting "Figure 2" and including "Figure 3".

DTSC Comment 2 (This comment was revised following the March 10, 1993, meeting after discussion and clarification with DTSC)

4.3.1 Removal and Offsite Disposal Alternative:

WET test will not be necessary to be provided for offsite treatment and disposal of hazardous wastes if the waste is handled as hazardous wastes per regulation requirement. Clean closure levels for arsenic and cadmium must be established and appropriate confirmation testing performed.

Discussion

Cleanup levels for lead, arsenic, and cadmium are established in Section 4.2 of the Closure Plan. The arsenic (80 ppm) and cadmium (40 ppm) levels are based on the proposed RCRA Corrective Action levels and are considered by EPA to be protective of human health and the environment and comparable to background levels.
As noted in Sections 4.3.1.2., 4.3.1.3., and 4.3.2.2, confirmation testing for the attainment of the lead, arsenic, and cadmium action levels will be performed following subgrade excavation under both closure scenarios.

Plan Modification

Section 4.2, page 27, is modified to clearly indicate the arsenic and cadmium clean closure levels.

DTSC Comment 3

4.3.1.4. SFM shall be free from hazardous materials and wastes.

Discussion

The Select Fill Material (SFM) used for backfilling and capping will be free from any hazardous materials and wastes. As discussed in sections 4.3.1.4 and 4.3.2.4, chemical and physical parameters will be monitored for the SFM, including lead, halogenated volatile organics and total petroleum hydrocarbons. Physical parameters will consist of grain size analysis, moisture content, plasticity index, and a compaction curve. The combination of physical and chemical testing will ensure that the SFM is free from any hazardous material or waste.

Plan Modification

Section 4.3.1.4 and section 4.3.2.4 has been modified to include the following:
"The SFM will be free from any hazardous materials and wastes."

DTSC Comment 4

Provide detail drawings on the Backfilling and Capping for clean closure alternatives as Figure 10 and remove the HDPE sections to Figure 11.

Discussion

The figures have been modified accordingly.

Plan Modification

Details on the backfill and cap for the clean closure alternative are provided in the closure plan as Figure 10. Figure 10 is now titled Site Plan Clean Closure figure. The HDPE Cover Details are now included as Figure 11.

DTSC Comment 5

Provide information and show in the drawings on the subdrainage system for the clean closure scenario.

Discussion

The clean closure alternative does not require the use of any subdrainage system. Clean closure will consist of a surface drainage swale sloped towards a collection trench entering the existing double-walled sump at the water treatment unit as specified in section 4.3.1.4. The site plan for clean closure of the impoundment and associated drainage details are available on the new Figure 10 and Figure 12.

Plan Modification

There are no plan modifications for this comment.

DTSC Comment 6

Provide swale and trench profile and detail in the figure 12. The calculation shall be rechecked, the drainage area is smaller than the June 92 submittal.

Discussion

Trench and drainage swale profile details are provided in Figure 11 as cross sectional details depicted as A-A' and B-B'. The trench and inspection port profile are located on Figure 11 and referenced on Figure 12. The anchor trench detail is located on Figure 11 and referenced on Figure 12. The June 16, 1992, closure plan included calculations for a 25-year storm using 4.59 acres as the surface area requiring drainage and the January 16, 1993, revised closure plan used 3.68 acres for the drainage area. This discrepancy is attributed to the unavailability of more precise site drainage details at the time of the June 16, 1992, report preparation. The January 15, 1993, revised closure plan included the use of a surface drainage map (RSR drawing #3279) which allowed for a more accurate calculation of the drainage area at the site.

Plan Modification

The surface area calculations have been rechecked and there are no plan modifications for the surface area calculation. In Section 4.3.1.4, second paragraph, last sentence and the fourth paragraph, third and fourth lines have been modified to provide references to Figures 10 and 12. RSR drawing #3279 has been included in Appendix I.

DTSC Comment 7

- Provide detail drawing on anchor trench.
- Provide cross section and profile of collection pipe on the figure 12.
- Provide design and calculation information on the selection of 4" AC layer and subbase layer to verify the pavement has adequate strength.

- Provide the permeability test and have an licensed engineer or geologist supervised the test on the barrier layer per sections 66265.228(f) and (g).
- Provide information on liner-leachate compatibility testing.

Discussion

- Detailed drawings on the anchor trench are provided.
- A cross section and profile of the collection pipe have been provided.
- Design and calculation information on the selection of 4-inch AC and subbase layer are provided.
- Since the design for this site has opted for a synthetic membrane barrier layer under Section 66264.228 (a) (8), the requirements for permeability and compaction testing of an earthen barrier layer do not apply.
- Liner leachate compatibility testing reports are provided.

Plan Modification

- Detailed drawings on the anchor trench are provided in Figure 11 as B-B' and Figure 13.
- Cross section and profiles of the collection pipe have been provided on Figures 11 and 12.
- Design and calculation information on the 4-inch AC layer and subbase layer to verify the pavement has adequate strength have been provided in Appendices F and H.
- No modifications required re: permeability and compaction testing.
- Liner leachate compatibility testing is provided as Appendix N.

DTSC Comment 8

Section 4.6 GMP: Delete MW9 and use only MW10 to characterize background water quality. MW 11, 12, and 13 shall be used to assess downgradient water quality of the impoundment.

Discussion

Quemetco concurs with omitting MW9 and use only MW10 to characterize background water quality. Additionally, Quemetco will use MW12 and MW13 in addition to MW11 to assess downgradient water quality of the impoundment.

Plan Modification

Section 4.6 has been modified to reflect the deletion of MW9 and the use of MW10 as the site characterization well for background conditions. Additionally Section 4.6 has been modified to reflect the inclusion of MW12 and MW13 in addition to MW11 as the wells to be used to assess water quality downgradient of the impoundment.

DTSC Comment 9

Cost estimate shall be updated; soil treatment seems too low, HDPE cost didn't input.

Discussion

The previous cost estimate reflects the price for soil treatment as $94,500. This cost is the low end range for onsite soil treatment. The new cost is based on treating approximately 4,815 cubic yards of soil at 1.5 tons per cubic yard. The stabilization cost is estimated at $35 per ton.

Plan Modification

Table 9 has been modified to reflect the additional cost for the liner and installation. Additionally, the cost for onsite soil treatment has been modified. In Table 9 the onsite soil treatment cost has been modified by omitting $94,500 and including $252,787. Table 9 has also been modified to include the cost of the HDPE liner and installation at $43,750.

DTSC Comment 10

Financial assurance documents shall be updated according to the revised cost estimate.

Discussion

No changes to the financial assurance documents are required due to the revised cost estimate.

Plan Modification

Appendix P has been revised and updated using 1992 financial information.

The following discusses additional comments provided orally during the March 10, 1993, meeting regarding the Closure Plan for the Inactive Surface Impoundment at Quemetco Inc. in the City of Industry.

DTSC Comment 11

DTSC recommends that the closure plan include arsenic and cadmium analysis to characterize the asphalt, excavated soil, and sump for disposal.

Discussion

Removal and disposal during closure consists of the asphalt liner, subgrade excavated material, and the sump system. Each of these materials will be analyzed for leachable lead, arsenic, and cadmium using the TCLP. If the TCLP lead or arsenic concentrations are greater than 10 mg/l, or if the TCLP cadmium concentration is greater than 5 mg/l, the soils will be treated and disposed of offsite as a hazardous waste. If the TCLP lead or arsenic concentrations are between 5 and 10 mg/l, or if the TCLP cadmium concentration is between 1 and 5 mg/l, the EP Toxicity test will be performed. If the EP Toxicity lead or arsenic concentration is greater than 5 mg/l, or if the EP Toxicity cadmium concentration is greater than 1 mg/l, the soils will be treated and

disposed of offsite as a hazardous waste. If the EP Toxicity lead or arsenic concentration is less than 5 mg/l, or if the EP Toxicity cadmium concentration is less than 1 mg/l, the soils are still hazardous but require no treatment before disposal.

Plan Modification

Section 4.3.1.1, 1st and 3rd paragraphs, section 4.3.1.2, 4th paragraph, section 4.3.1.3, 3rd and 4th paragraphs, have been modified to include arsenic and cadmium analysis to characterize the asphalt, excavated soil, and sump for disposal.

DTSC Comment 12

DTSC has expressed concern that only lead contamination is addressed and not arsenic or cadmium contaminants for the treatability study and that fundamental chemical concepts (ie. pH and chemical reactions) are not discussed.

Discussion

Without strict control of pH, typical stabilization will not guarantee the desired result, i.e. that metals become fixated and do not leach. Arsenic and cadmium will also be included in the treatability testing. The treatability testing by the selected remediation contractor will reference a literature survey and ensure that chemical equilibria is obtained after chemical fixation.

Plan Modification

Section 4.3.2.4, has been modified to discuss pH control and testing for fixation of lead, cadmium, and arsenic.

Additional Plan Modifications

Section 4.3.2.4 ninth paragraph, the fourth line and the last line have been modified to include Figures 11, 12 and 13, showing cross sections and profiles of the HDPE Cover details.

Section 4.3.3, the first paragraph, third line has been modified to omit Figure 13 and include Figure 14.

Section 10.0, the second paragraph has been modified to omit Figures 14 and 15 and include Figures 15 and 16.

Figure 14, the Proposed Schedule for Closure has been changed to Figure 15.

Figure 15, the Proposed Schedule for Closure has been changed to Figure 16.